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Chair's summary of the regional implementation meeting for Asia and the Pacific

I. The development context of Asia and the Pacific

1. The region of Asia and the Pacific was at a crossroads. Policy and investment decisions made today, whether in response to cross-sectoral issues, to thematic clusters such as transport, chemicals, waste management and mining, or to the 10-Year Framework of Programmes on Sustainable Consumption and Production, would lock countries into development patterns for decades to come. The key was to: (a) facilitate economic development, which would decouple the use of resources, whether minerals or chemicals, from the growth of gross domestic product (GDP); (b) promote sustainable consumption and production patterns and sustainable transport; and (c) provide access to employment and basic needs, while minimizing congestion, waste, pollution and energy use.

2. With regard to development and sustainability in Asia and the Pacific, whether in terms of cross-sectoral issues or in a thematic context, there was a need to build a resilient, integrated socio-economic and ecological system that could respond to the shocks that had recently affected the regional and global economy as a result of the financial, fuel and food crises. The development of such a system would require a focus on three actions: (a) staying within limits; (b) building the resilience of the integrated system; and (c) responding to system linkages.

3. The notion of limits, or thresholds, was an important concept in sustainability. Resource use, or eco-efficiency, which was the basic ingredient of both green growth and sustainable consumption and production (the cross-cutting theme relevant to the thematic cluster under discussion), was therefore essential in order to maintain pressures within limits and promote system resilience and, consequently, sustainability. Participants observed that the concern to foster ecological harmony

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and sustainability was deeply rooted in the region, as exemplified by the "gross national happiness index" in Bhutan, the "sufficiency economy" in Thailand, the strategy for "low-carbon green growth" in the Republic of Korea and the "harmonious society" in China.

4. Green growth was focused on the decoupling of socio-economic development and related human activities from their environmental impacts. The implicit goal was to minimize the negative impacts of one component system on the others. The Economic and Social Commission for Asia and the Pacific (ESCAP) had therefore identified the eco-efficiency of growth as a key element in meeting future needs while remaining within the limits of environmental carrying capacity.

5. Thus, the policies and actions required for the development of resilient socio-economic systems should help to resolve problems related to both cross-sectoral and thematic issues and should receive greater attention in national, regional and international dialogues. There was a need to recognize the linkages among the social, economic and ecological systems. Currently, investment in the hardware needed for sustainable development was being well promoted by policymakers, while investment in the software — meaning the changes required in terms of the behaviour, governance, engagement and empowerment of multiple stakeholders — had not been sufficiently addressed. Stronger input regarding cross-cutting and thematic issues was needed.

6. Finally, in the midst of multiple crises, when traditional development models were being questioned and the world was seeking new paths and new leaders, the region of Asia and the Pacific had the opportunity to shape not only its future, but that of the entire world. The need for enhanced financial provisions, environmentally sound technology transfer and regional cooperation aimed at the sharing of good practices was also expressed. In addition, the region could develop a common set of standards, norms and development approaches — one that encompassed eco-efficiency principles, policies and strategies and incorporated all aspects of sustainable development (economic, social and environmental) in an inclusive and balanced way.

II. General comments on the thematic reports

7. Participants expressed their appreciation for the drafting of the comprehensive thematic and synthesis reports and praised them as useful in facilitating the regional discussion in the process of the Commission on Sustainable Development. However, it was pointed out that, owing to the broad scope of each of the five thematic areas, as well as to their complex interlinkages, the current regional implementation meeting process might be insufficient to comprehensively address all aspects relevant to areas of priority for collective regional action.

8. In order to ensure a broad and detailed information base for the review process of the Commission, meeting participants encouraged all Governments to submit national reports to the Commission secretariat.

III. Review of issues related to thematic areas

A. Transport

1. Progress and achievements

9. Considerable progress had been made in the areas of regional integration and connectivity. The benefits of improved transport, however, had affected mainly populations in coastal areas of Asia, particularly near seaports. Thus, there remained a substantial transport task in terms of reaching large populations in remote and rural areas, as well as in landlocked countries, to promote inclusive prosperity.

10. The number and the quality of roads had increased in recent years, but much more needed to be done to extend adequate transport services into rural areas, including the development of feeder roads. Efficient access to markets, especially in terms of transporting agricultural goods, was imperative to permit trade in locally produced goods and thereby make rural economies viable. Transport played a crucial role in poverty alleviation, by facilitating access to employment for low-income groups and by increasing the amount of time that they could devote to income-producing activities. In rural areas, distance from schools and the quality of roads were major determinants in education completion rates, whereas distance from a hospital was a significant factor in infant and child mortality, as well as maternal mortality.

11. The provision of transport services of sufficient quality was closely linked to economic performance and social equity. A socially sustainable transport system would meet the mobility and access needs of society's most vulnerable groups, including low-income families, women, the elderly and persons with physical disabilities. In particular, sustainable transport and gender should go hand in hand. Increased mobility was crucial to enable women to participate in economic development. Many countries were placing priority on public transportation, and good examples of universal access could be seen throughout the region. Some countries, such as the Philippines, were in the process of developing national strategies for environmentally sustainable transport. At the same time, much more needed to be done in the region if socially inclusive transport systems were to be developed.

12. Air quality levels had improved in a number of Asian cities in recent years, thanks primarily to the successful phasing out of lead gasoline and two-stroke motorcycle engines, as well as to improved vehicle emission and fuel quality standards. Despite that progress, air pollution levels in Asian cities still exceeded guidelines established by the World Health Organization, resulting in an estimated half a million premature deaths every year. Particulate matter was the main pollutant of concern, with ozone becoming increasingly problematic.

13. Transport was among the principal sectors in terms of total energy consumption in Asia and the Pacific, and was the largest consumer of petroleum. That had significant implications for the region's energy security, as the majority of countries were net energy importers and were particularly affected by volatile oil prices. Some countries had achieved progress in improving fuel efficiency and vehicle emission standards. Japan, for example, had been able to achieve a 50 per cent improvement in fuel efficiency during the previous 20 years, thanks to its "Top Runner standards" approach.

14. The transport sector was also the second-largest contributor to global carbon dioxide emissions, accounting for 23 per cent of the total, and was the fastest-growing source of such emissions in developing countries. Countries were taking steps to reduce emissions by, for example, promoting public transportation, moving towards less-carbon-intensive modes such as rail, and improving fuel efficiency. Such measures had already made it possible to reduce the emissions of the transport sector in Japan, for example, from the peak reached in 2001. In countries in which the carbon-intensiveness of the transport sector was already relatively low, the priority was to maintain that level while expanding access.

2. Challenges and constraints

15. The lack of access and mobility in rural areas had stifled the achievement of true sustainable development. An incomplete freight infrastructure limited the market reach of local products. Rapid motorization in the region had contributed to a number of problems, including congestion, air pollution, greenhouse gas emissions and transport-related injuries and fatalities. Low-income residents often bore the brunt of the negative impacts of motorization, despite the fact that many of the poor did not themselves own motorized transport.

16. Among the most significant obstacles to sustainable transport were the following: (a) inadequate institutional and governance structures; (b) a lack of sufficient information on the part of national and local policymakers; (c) insufficient baseline data with regard to existing modal share, user needs, air quality and other critical factors; (d) insufficient human resources to address the relevant issues; (e) inadequate funding resources; (f) a lack of access to suitable technologies; (g) focus on only a few major cities, not taking into account actions aimed at sustainable transport in secondary and smaller cities and rural areas; and (h) a lack of vehicle emission standards. Also noted was the importance of broad-based public participation in transport infrastructure development processes.

17. Adaptation to climate change was expected to be a major challenge for the region in the coming years, as transportation infrastructure stood to be severely affected by its impacts, including sea level rise and more extreme weather events. Asia and the Pacific was already the region most affected by natural disasters, and a lack of adequate transportation greatly hampered relief efforts.

3. Policy options/way forward

18. Addressing the complexity of the sustainability challenges posed to the transport sector required the development of integrated transport strategies. Such an approach should include, inter alia, land-use planning, the planning of non-motorized and public transport options in both urban and rural areas, infrastructure for intermodal freight systems, business models aimed at financially viable operations and maintenance, communications and outreach messages designed to influence behavioural patterns, and clean technologies with a view to achieving energy efficiency and low emissions.

19. Participants noted with concern that access to basic rural transportation and related services was still lacking in many areas, in particular in the least developed countries of the region, which was hampering the effectiveness of poverty eradication efforts. Greater international technical and financial support was urgently needed.

20. International efforts to address global climate change should provide opportunities to create transport systems that also delivered economic, social and environmental benefits. Focusing on shared benefits could help to achieve win-win solutions in the development of climate change mitigation strategies. Given the need to expand access to efficient and affordable transportation in the region, especially in rural areas, policies to that end should focus not on reducing transport, but on reversing the growth in the greenhouse gas emissions of the sector, including through appropriate technologies. Public transportation should be promoted in order to move towards less-carbon-intensive modes such as rail. Promoting fuel efficiency and introducing fuel economy measures, such as an appropriate tax on fossil fuels, could also contribute to low-carbon development.

21. Private-sector collaboration within the framework of public-private partnerships had already proved effective in many transport projects and should be considered as a means of advancing the transport and development agenda. Many low-cost technological solutions were already available but had not been implemented. Partnerships with scientific and technological communities could facilitate the dissemination of that knowledge. Moreover, partnerships with civil society organizations were instrumental in addressing the needs of the most vulnerable groups.

22. Regional and international cooperation should be strengthened in order to advance the transport and development agenda. Regional integration efforts, such as the intergovernmental agreements on the Asian Highway Network[1] and the Trans-Asian Railway Network[2] were vital to the development of sustainable intermodal transport systems that would deliver efficient domestic transport services and, at the same time, provide access to international markets and to a greater number of remote areas. International financing provided by development banks and bilateral agencies was essential in catalysing initial demonstrations and in closing financing gaps. Initiatives such as the Ministerial Conference on Global Environment and Energy in Transport played an important role in advancing the low-carbon sustainable transport agenda. The Asian Environmentally Sustainable Transport initiative was also playing an instrumental role in the promotion and mainstreaming of integrated strategies and approaches aimed at the development of sustainable transport in Asia.

B. Chemicals

1. Progress and achievements

23. Asia and the Pacific, the second largest region in the world in terms of production and consumption, after Europe, had made progress in the safer management of chemicals.

24. Overall, most countries in Asia and the Pacific were making progress in improving knowledge, norms and procedures related to the safer management of chemicals on the basis of a number of international agreements, instruments and programmes in that area. Those agreements covered such areas as the strengthening

[1] United Nations, *Treaty Series*, vol. 2323, No. 41607.

[2] Economic and Social Commission for Asia and the Pacific resolution 62/4.

of knowledge and information measures through education, training and awareness-raising activities, instruments and programmes and risk reduction programmes.

25. Many countries had also improved chemical safety policies in the development of systems for emergency preparedness and response with regard to chemical accidents, the control of chemical use in protected areas and the strengthening of liability and compensation schemes addressing damage to human health and the environment.

26. Most countries had benefited from new knowledge and information acquired as a result of multilateral environmental agreements relating to chemical management and capacity-building programmes. Those programmes were being implemented bilaterally and multilaterally. The progress made in countries in Asia and the Pacific in implementing, inter alia, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade,[3] the Stockholm Convention on Persistent Organic Pollutants[4] and the Strategic Approach to International Chemicals Management was highlighted.

27. Initiatives to prevent the illegal trafficking in chemicals and hazardous wastes included the ratification of relevant multilateral environmental agreements, such the Montreal Protocol on Substances that Deplete the Ozone Layer,[5] the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal,[6] and the Stockholm Convention, as well as global initiatives such as the Strategic Approach to International Chemicals Management.

2. Challenges and constraints

28. The implementation of existing international policy frameworks relating to chemicals should be further strengthened, including through the provision of the financial resources and capacity-building required by developing countries. The implementation of established international policies was uneven in the region, and the development process might be delayed in some cases as a result. In Pacific island countries and territories, implementation had been slow in comparison with that in other subregions. Those countries and territories also faced difficulties in implementation owing to a lack of the required infrastructure.

29. Despite the considerable efforts made over the previous decade, many countries lacked the capacity to ensure environmentally sound chemical management. Often, national management capacity could not keep pace with the rapid growth in the level of consumption and the number of new chemicals.

30. Furthermore, it was imperative to engage the private sector and to promote corporate social responsibility in the area of chemical management. The chemical industry continued to evolve, new chemicals were being developed, and access to information regarding the risks associated with those chemicals was often unavailable or limited.

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[3] United Nations, *Treaty Series*, vol. 2244, No. 39973.

[4] Ibid., vol. 2256, No. 40214.

[5] Ibid., vol. 1522, No. 26369.

[6] Ibid., vol. 1673, No. 28911.

3. Policy options/way forward

31. In order to achieve sound chemical management, Governments needed to commit themselves to the following actions: (a) integrate chemical management into national development priorities; (b) develop strong national institutional and programmatic frameworks; (c) promote the ratification and implementation of the relevant international conventions; (d) encourage the implementation of internationally recognized standards, tools and approaches relating to the environment, health and protection from chemicals, revise legislation and enforce existing regulations; and (e) promote the participation of the private sector and non-profit civil society in chemical management.

32. As most problems encountered in developing countries stemmed from the inappropriate distribution of knowledge and low capacity in terms of human resources, technical assistance should be strengthened with a view to educating local personnel about the impacts of chemicals and assessment methodologies.

33. National Governments and multilateral agencies should engage in robust cooperation to support the preparation of the required infrastructures, including laws and regulations, research facilities and databases. Such interventions should assist in improving the reliability of information and in informed decision-making. Increased international efforts should be made as a matter of urgency to assist countries in developing and enforcing legislation aimed at controlling the illegal movement of toxic chemicals.

34. As developing countries in the region lacked the capacity to respond effectively to serious accidents or to monitor long-term environmental effects, preventive policies should be strengthened. Appropriate technologies should be developed to guide resource allocation and investment.

C. Waste management

1. Progress and achievements

35. Several global initiatives had been undertaken to address waste. Local Agenda 21, the Millennium Development Goals, the Basel Convention, the Stockholm Convention, the Montreal Protocol, the Strategic Approach to International Chemicals Management and the Kyoto Protocol,[7] inter alia, covered various aspects of municipal, industrial and hazardous waste and wastewater. In addition, several international and bilateral agencies were actively engaged in promoting sustainable waste management.

36. In order to promote the exchange of information and to strengthen the capacities of developing countries, including the least developed countries, to acquire and disseminate waste treatment technologies, a "3R" (reduction, reuse and recycling) knowledge hub had been created with the assistance of the Government of Japan.

37. While most municipal solid waste was dealt with by local governments, industrial and hazardous waste, health-related waste and emerging waste were usually addressed by government at higher levels. Local and national governments

[7] See FCCC/CP/1997/7/Add.1, decision 1/CP.3, annex.

were facing several challenges in managing waste, including a lack of financial resources, limited availability of suitable technology and land for waste disposal, and increasing transportation costs. Many Governments had begun to take steps towards ecologically sound solid-waste management. Some had adopted comprehensive legislation concerning the environmentally sound management of hazardous waste, solid waste and wastewater. Many countries had incorporated the "3R" approach into their waste management practices. The implementation strategies of many countries focused on involving the private sector and communities in solid-waste management, particularly in the "3Rs". Meeting participants were informed about country initiatives aimed at the conversion of waste into energy and the composting of organic waste for use as fertilizer in agriculture.

2. Challenges and constraints

38. Despite the progress made, several challenges and constraints remained, as waste generation was rising rapidly in the region of Asia and the Pacific, in particular as a result of economic growth, urbanization and industrialization. The amount of municipal solid waste, hazardous waste and medical waste was expected to continue to grow, exemplifying the persistent nature of many of the challenges faced by the region.

39. Although many countries had promulgated laws and regulations in this area, their implementation and enforcement remained a challenge. Moreover, the development of relevant capacities on the part of national and local governments had not been undertaken. Another key challenge was gaining access to the technologies and the financing needed to address waste management.

40. A key challenge with regard to hazardous waste lay in the differences among countries regarding definitions. That made it difficult to enforce laws and was among the reasons for the continuing import and export of hazardous waste. Moreover, the transport, treatment and disposal of nuclear waste remained a challenge in the region.

3. Policy options/way forward

41. Meeting participants highlighted the following as the key areas for continued and future action: (a) greater regional cooperation in the exchange of information with a view to the formulation of national waste management strategies; (b) innovative approaches and technologies with regard to municipal solid waste; and (c) biomedical waste management. The development of guidelines in the context of the Conference of the Parties to the Basel Convention and the exchange of regulatory information concerning hazardous waste through the activities of the Asian Network for Prevention of Illegal Transboundary Movement of Hazardous Wastes were also cited as key vehicles for future regional cooperation.

D. Mining

1. Progress and achievements

42. The region of Asia and the Pacific was richly endowed with mineral resources and was a major contributor to the global production of such resources. The demand

for minerals had increased as regional economies had grown, while the kinds of minerals in demand were changing. Nuclear energy production, requiring uranium, had been accelerating in recent times, while the development of clean technologies had led to an increased demand for rare metals, including rare earth elements. Large-scale mining continued to pose challenges for local communities, including compromised human and animal health and well-being and the destruction of natural resources and ecosystems. Mineral resources were found mainly in areas that were home to indigenous peoples, the benefits were not shared, and the environmental impacts were borne largely by those groups. In addition, women, young people and children were particularly vulnerable.

43. Regional frameworks supporting the development of new mining policies had been established by the Association of Southeast Asian Nations (ASEAN) and Asia-Pacific Economic Cooperation (APEC). Both ASEAN and APEC had made important political declarations on mining.

44. Governments had taken steps to promote responsible mining, including the establishment of specific policy frameworks to promote the sustainability of the mining sector. The following initiatives were noted during the regional implementation meeting: (a) policies, regulations and procedures for rehabilitation planning; (b) conflict resolution management; (c) consultative processes; (d) environmental impact assessment; (e) damage assessment as a basis for the improvement of compliance and monitoring; (f) small-scale mining; and (g) the analysis of stakeholder interest. Furthermore, mining had been prohibited in catchment areas and forest reserves, and higher prices had been established for water use by the mining sector. National experiences also highlighted the good potential of combining responsible private-sector investment, strong Government regulation and social policies to ensure benefits for local communities. The representative of one small island State highlighted the fact that, in that country, applications for mining concessions had been denied and priority had been placed on sustainability considerations over short-term economic gain.

45. The extractive industry had taken steps to establish management systems and policy frameworks in order to comply with global standards and to improve reporting. There had also been cooperative action to promote social responsibility and scientific, sustainable mining. However, there was still a gap between expectations regarding sustainability "standards" and mining operations on the ground.

46. Moreover, United Nations entities and civil society organizations were important players in the region. International agencies such as the International Labour Organization and the United Nations Environment Programme (UNEP) had established important initiatives to support sustainable mining.

47. Success stories in the area of technology innovation included techniques for in situ leaching, energy efficiency, reductions in water requirements, and enhancements in robotics and other technologies to reduce energy demand and the risks posed to humans.

48. Despite the progress made in several areas, the development opportunities presented by the mining sector had not been fully realized, mineral resources were undervalued, benefits were not equitably distributed and the linkages with the wider economy were weak. Countries that were heavily dependent on the export of

commodities were vulnerable to changes in global commodity prices and to natural disasters.

49. It was recognized that mining was not sustainable over the long term. A good example of industrial ecology approaches that supported demand management was the Eco Town Programme, aimed at maximizing the economic and environmental opportunities presented by the geographical proximity of industrial and urban areas, through the use of commercial, municipal and industrial waste in industrial applications.

2. Challenges and constraints

50. Among the challenges facing the mining sector were the following: ensuring the efficient use of resources; the high intensity of energy use; the management of toxic substances; ensuring appropriate labour conditions; the development of mutually beneficial relationships with local communities; and the management of financial and technological risks. There were persistent challenges related to artisanal gold mining and the associated mercury contamination, as well as to the radioactive waste management issues arising from uranium mining.

51. The mining industry was increasingly required to conduct more environmentally and socially responsible and acceptable operations. Raising public awareness, the anti-mining sentiments expressed by some groups, institutional investors' awareness of the links among economic performance, risk and environmental responsibility, and the recognition of the rights of indigenous groups as a critical and high-profile issue provided incentives for increased corporate social responsibility. In addition, mining was an energy-intensive activity, and the role of the sector in mitigating climate change should be better articulated. Integrated water and ecosystem management required increased attention to areas potentially affected by mining; mining was water-intensive, and operations were often located in ecologically sensitive areas such as mountains.

52. Recent trade developments relating to the trade in mercury and mercury compounds reflected increasing environmental awareness, a trend that would have an impact on the regional mining industry. Trade and environmental policies should be mutually supportive, and trade-distorting policies should be avoided.

53. While mining was an important economic sector, sustainability considerations required that serious consideration be given to measures aimed at reducing the demand for minerals through demand-side management, including "3R" approaches.

54. While regulatory frameworks and incentives were improving in several countries, the lack of implementation capacities was reducing their effectiveness. The implementation gaps relating to the enforcement of regulations were noted. Implementation shortfalls reflected human capacity shortfalls as well as financing and technological constraints, as noted by the representatives of several countries.

3. Policy options/way forward

55. An inclusive mining policy was needed to support holistic approaches aimed at meeting the demand for minerals. Greater policy integration with other sectors was required, as were assessments of the strategic sustainability of mining operations.

56. Enhanced regional cooperation, including an international convention in the areas of mineral trade and investment policy, to support environmental rehabilitation could be considered. It was suggested that member countries should spend a percentage of their income derived from mining on environmental rehabilitation as a way to support the sustainable development of the mineral sector. The experiences of countries in the region with such an investment policy should be shared.

57. Investment made on the basis of inclusive and transparent processes should be promoted. That would require greater consultation regarding issues related to indigenous peoples; the rights of indigenous peoples were particularly at risk in mining operations, and human rights approaches could assist in the establishment of good practices. Inclusive and transparent processes should be supported by policies aimed at free, prior and informed consent and the inclusion of women's perspectives in policymaking and planning. Better communication was needed with respect to risk and as a basis for risk management. Specific conclusions should be drawn regarding what constituted acceptable mining activity.

58. Increased capacity in developing countries to conduct environmental impact assessments was essential.

59. Corporate social responsibility and ethical approaches, such as ensuring fair trade in minerals, should be promoted.

60. Investments in science and technology were needed in areas that included the following: (a) clean technology to support the mitigation of environmental impacts, the use of resources, and the management of mining waste; (b) the rehabilitation of abandoned mines; and (c) advanced mining technology, including in new fields such as geomimetics. In that regard, the role of scientific institutions as Government partners should be strengthened.

61. Demand management should be strengthened through life-cycle assessments and industrial ecology approaches. Recycling was also critical if demand was to be kept within sustainable limits. Good land-use planning should be considered in order to optimize benefits and help to prevent conflict. The prohibition of mining in catchment areas and forest reserves was one example.

62. While nuclear power was being promoted as a viable source of energy by a number of Governments in the region, dialogue should be strengthened as a framework for discussing important issues such as the phasing out of uranium mining and other nuclear activities, given the extreme toxicity of the waste resulting from such activities and the fact that safe handling had proved difficult.

E. 10-Year Framework of Programmes on Sustainable Consumption and Production

1. Progress and achievements

63. Only seven years before, in 2002, at the World Summit on Sustainable Development, the world's Governments had reaffirmed their commitment to safeguarding the environment for future generations. The agencies of the United Nations system had been working together to implement several action programmes, as well as to support the initiatives of many Governments.

64. With the vision of achieving environmentally sustainable economic growth in the region of Asia and the Pacific by promoting effective environmental policies, the participants in the fifth Ministerial Conference on Environment and Development in Asia and the Pacific, held in 2005, had proposed green growth as a viable approach to the promotion of synergy between environmental and developmental objectives. The outcomes of the Conference were noted by the Economic and Social Commission for Asia and the Pacific (ESCAP) in its resolution 61/9. Through that resolution, the Commission sought to address the major policy issues related to green growth highlighted in the Ministerial Declaration on Environment and Development in Asia and the Pacific, 2005,[8] and in the Regional Implementation Plan for Sustainable Development in Asia and the Pacific, 2006-2010.[9]

65. Eco-efficiency and resource efficiency constituted the backbone of the green-growth approach, which was being applied through a number of policies promoted in the region, including the following: (a) a green tax and budgetary reform; (b) sustainable infrastructure; (c) sustainable consumption and production; (d) the greening of business and markets; and (e) investment in natural capital. Those policies provided strong incentives for protection of the environment.

66. Regional green-growth policy dialogues and forums had been held since 2005. The three regional policy dialogues that had been held had focused on: (a) a green tax and budgetary reform; (b) public policy and a resource-saving society; and (c) the greening of business and environmental protection as business opportunities. Moreover, four meetings of the Seoul Initiative Network on Green Growth had been held to permit the discussion of economic instruments, sustainable consumption and production, and climate change concerns. The third meeting, held in 2008 in Cebu, Philippines, in cooperation with the Asia-Pacific Roundtable for Sustainable Consumption and Production, had addressed issues related to sustainable consumption and production.

67. Mobilizing and refocusing the global economy towards investment in clean technologies and natural infrastructure such as forests and soils was the best bet for achieving real growth, combating climate change and triggering an employment boom in the twenty-first century.

68. On 22 October 2008, UNEP and leading economists had launched the Green Economy Initiative. The Initiative, which would initially run for a period of two years, had three key elements: the Green Economy Report, the Green Jobs report, and the Economics of Ecosystems and Biodiversity study. The Green Economy Report would provide an overview, analysis and synthesis with regard to how public policy could help markets to accelerate the transition towards a green economy.

69. In the region of Asia and the Pacific, UNEP was currently working with China and the Republic of Korea on the drafting of national reports on the green economy. In addition, capacity-building activities were being carried out and discussions with Asian countries on the development of country studies were ongoing.

70. Moreover, the circular economy adopted by the Government of China as the development model for that country in its most recent five-year plan placed

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[8] *The Fifth Ministerial Conference on Environment and Development in Asia and the Pacific, 2005* (United Nations publication, Sales No. E.05.II.F.31), annex I.

[9] Ibid., annex II.

emphasis on the most efficient use and recycling of its resources, as well as on environmental protection.

71. The 3R Initiative had been proposed by the Government of Japan, aimed at building a society with a sound material cycle through the effective use of resources and materials, and had been agreed upon as a new initiative of the Group of Eight at its Sea Island Summit, held in June 2004. The "3R" platform, which was an implementing mechanism for activities to be carried out in the developing countries of the region of Asia and the Pacific, had also been promoted at the Ministerial Conference on the 3R Initiative, hosted by the Government of Japan in April 2005.

72. The ESCAP-UNEP sustainable consumption and production help desk had been established in 2006. Its mission was to promote innovative practices in the area of sustainable consumption and production in Asia and the Pacific. The help desk acted as an information hub, jointly organized and hosted meetings, and developed specific partnerships with other agencies regarding sustainable consumption and production. Since June 2009, the help desk had hosted a regional training-of-trainers course on the development and application of green-growth policy tools.

73. The region had proved fertile ground for the implementation of a number of global and regional initiatives: the joint Programme on Resource Efficient and Cleaner Production in Developing and Transition Countries, of the United Nations Industrial Development Organization and UNEP, addressed sustainable industrial development through environmental protection, and the multi-country regional technical assistance programmes of the Asian Development Bank and the Network for Industrial Environmental Management and Greenhouse Emission Reduction from Industry in Asia and the Pacific programmes of UNEP addressed the cross-fertilization of information and the sharing of knowledge. Furthermore, in Manila in September 2009, the participants in the International Conference on Green Industry in Asia had adopted a ministerial declaration on the promotion of green growth, green industry, green jobs and sustainable production.

74. In most countries, the tools and initiatives related to sustainable production were more advanced than those related to sustainable consumption. In particular, tools and initiatives for cleaner production, including case studies, human capacities, legislation and networks, received a significantly higher rating throughout the region. That was most likely the result of a concerted international effort over the previous two decades to build cleaner production capacity in the region. National Cleaner Production Centres were playing an important role in that regard. Countries with such Centres had made further progress in the implementation of cleaner production.

75. In all the countries of North-east Asia, there were various cleaner production programmes and laws promoting the efficient use of resources. A circular economy that required responsibility on the part of producers beyond the production stages was also in place in countries in the subregion. National Cleaner Production Centres in those countries were engaged in formulating policies and management methods, developing cleaner technologies, operating websites providing the public with ready access to those data, and conducting pilot projects on cleaner production auditing — for example, in the pulp and paper industry — in collaboration with industries in other economies.

76. The majority of the countries in South-east Asia had National Cleaner Production Centres, which were quite active, spearheading the cleaner production activities in those countries. Activities included accrediting ISO 9001 and ISO 14001 certificates, conducting awareness-raising seminars, and producing and disseminating cleaner production information and training tools.

77. National round tables had been held in a number of Asian countries, including China and India, in cooperation with the Asia-Pacific Roundtable for Sustainable Consumption and Production. The two national round tables on sustainable consumption and production that had been held in India in 2006 and 2007, in Mumbai and New Delhi, respectively, had been organized by the Society in Action Group, an all-volunteer Indian non-governmental organization that had been promoting sustainable consumption and production since 2003.

78. In New Delhi in February 2009, the Society in Action Group had held a meeting of the Marrakech task forces in India, to facilitate their task of documenting best practices, to initiate project collaboration and to encourage intraregional and interregional information exchange. The discussion had focused on green growth and on sustainable lifestyles and related education, tourism, public procurement, buildings, construction and products.

79. As a vision and overriding goal, sustainable consumption and production was easy to embrace as the only acceptable long-term strategy for human survival. Determining how to get there would be quite difficult.

2. Challenges and constraints

80. Despite the region's high poverty level, consumption, as measured by the ecological footprint, exceeded the available bioproductive area per capita in at least 18 countries. The region had been experiencing high-intensity energy use, which had given rise to various pollution concerns. For example, transportation had contributed to pollution; hence, the importance of public transport policies had been stressed, as well as the promotion of clean transport technologies.

81. Other important challenges in the region included upscaling and mainstreaming sustainable consumption and production achievements, as well as improving coordination among various stakeholder initiatives to optimize resource consumption and prevent duplication.

82. The gross inequities reflected in the current patterns of resource consumption both within and among nations would need to be corrected if humanity was to build the kind of world partnership between North and South that was required in order to resolve global environmental problems. For instance, from 1994 to 2004, there had been a 40 per cent discrepancy between the subregions with the highest and the lowest steel consumption rates.

83. Most countries in the region faced institutional challenges: greater political will was needed, the roles of Government agencies should be clarified, budget allocations needed to be optimized (according to recent estimates, Government spending on environmental protection amounted to less than 1 per cent of GDP in countries in Asia and the Pacific), and access to justice should be enhanced. Over the next 50 years, the global economy would need to respond to the challenges of both the inner limit of sustainability (inequality) and the outer limits of sustainability (environmental constraints).

84. There was a need to invest in people who were dedicated and willing to commit themselves to environmental governance. That was a common challenge in Asia, and it was perhaps the most urgent: a budget could be sourced as economies grew, but skilled personnel could not be bought off the shelf.

85. The trading of secondary materials in the region of Asia and the Pacific was one concern that entailed the development of environmental and legal issues. While importing second-hand materials was an alternative to using raw materials for production, it was also a means of transferring the responsibility for final disposal to lower-income countries that might not have the capacity to carry out that task in an environmentally sound manner.

86. Other important constraints for the region were the challenges of energy efficiency, sustainable transport/mobility and integrated waste and water management; the lack of a financial and economic framework for sustainable consumption and production; the need for sustainable procurement; the limited mainstreaming of sustainable products and services; insufficient education and information regarding sustainable consumption and production and sustainable lifestyles; insufficient awareness about how to increase business competitiveness through sustainable consumption and production; and challenges in terms of unplanned urban and rural development and poverty alleviation.

3. Policy options/way forward

87. Strategic sustainable consumption and production programmes, such as green public procurement programmes, could be launched as both regulatory and market-based instruments in economies whose entire commodity markets were dominated by public procurement. With the public sector taking the lead, green public procurement programmes would have a strong steering effect on the private sector and make responsible purchasing mandatory for all public authorities.

88. Clear sustainability targets with indicators (for example, in the areas of resource use intensity, emissions, green public procurement and green products) should be identified at both the national and local levels. Enforced through models and examples, such targets should be properly identified for and communicated to stakeholders.

89. There was a need to translate the policies, programmes and initiatives of the public and private sectors into public and private investment in green technology. The objective was to create momentum for investors and to emphasize to them that investment in green technology was the most viable option for sustainable economic growth in Asia and the Pacific.

90. Although sustainable production patterns were often presented as the most important need of economies in Asia and the Pacific, there was an equal need to promote such patterns. This applied both to the individual consumption decisions of citizens and to corporate and public consumption decisions. Some countries, such as Bhutan, with its "gross national happiness index"; Thailand, with the "sufficiency economy"; the Republic of Korea, with its strategy for "low-carbon green growth"; and China, with the "harmonious society", had successfully addressed those issues and had taken the lead in setting positive examples in the region.

91. Concrete steps could be taken through the development and implementation of a range of economic instruments to ensure sustainable production and consumption

patterns and guarantee that the ecological consequences of using natural resources would be reflected in prices.

92. Priority should be placed on the need for capacity-building in terms of human capability, technological know-how and leapfrogging options.

93. Given the similarities among and the interdependence of many economies belonging to the same subregion, the benefits of simplification and benchmarking could be easily realized through strengthened subregional cooperation in the area of sustainable consumption and production.

94. Many of these regional efforts could be traced back to the United Nations Conference on Environment and Development, at which sustainable development had been defined as the objective of an umbrella programme. The sustainable consumption and production concepts developed as a result still needed to be incorporated into the main focuses of many economies in the region of Asia and the Pacific. A comprehensive strategic and policy approach was necessary and urgent if greater resource efficiency was to be achieved. It was also important to integrate industrial firms, networks or chains of companies, eco-industrial parks and regional infrastructures into a broad system to support resource optimization.

95. There was a need to incorporate long-term sustainable development principles into short-term interventions. Thus, infrastructure investment and economic stimulus policies would not lock economies into wasteful consumption patterns in the future.

96. Developing countries constituted the majority of the economies in Asia and the Pacific, and those countries had strong civil society and industry sectors that could be tapped for the realization of sustainable consumption and production programmes. Governments in the region should encourage and empower those sectors as partners in the promotion and implementation of such programmes.

97. Both ESCAP and the International Environmental Technology Centre of UNEP had spearheaded the collection of data on environmentally sound technologies and the documentation of indigenous technologies. Such knowledge-sharing could be the prime asset of the region. There was a need to expedite the dissemination and operationalization of those strategic initiatives.

98. In that respect, knowledge and know-how concerning sustainable consumption and production practices and tools had been developed and utilized by many organizations, including the International Green Purchasing Network and the Thailand Environment Institute, which advocated green procurement, eco-labelling and life-cycle management in the region of Asia and the Pacific. However, those practices and tools had not yet been widely disseminated. Information platforms and networks that could support the policymaking process at the national and regional levels existed but needed greater promotion.

99. A comprehensive local, national and regional education master plan aimed at making people better-informed consumers was suggested at the meeting. Such education should take the form of: (a) formal and complementary education programmes conducted within the framework of existing education systems in the public sector; (b) campaigns and movements on the part of civil society; and (c) corporate practices reflecting social responsibility, carried out by private

companies. Such a master plan would be most efficient if it were based on a participatory approach that would facilitate success at the local and national levels.

100. Given the role played by livestock in poverty reduction, food security and sustainable development, as well as the fact that approximately 1 billion of the world's poorest people depended on animals as a source of food, livelihoods and social status, it would be beneficial to consider animal welfare in the formulation of sustainable consumption and development policies.

101. A series of prioritized horizontal and sectoral programmes on sustainable consumption and production had been identified as the input contributed by the region of Asia and the Pacific to the 10-Year Framework of Programmes on Sustainable Consumption and Production, to be discussed by the Commission on Sustainable Development at its eighteenth and nineteenth sessions.

IV. Cross-cutting issues

A. Progress and achievements

102. The principle of the oneness of humankind should be fully recognized as a principle of international collaboration, and ethical, moral and spiritual approaches should be encouraged in discussions on sustainable development. Greater awareness of the interconnectedness of the spiritual and material aspects of humanity should be fostered. Sustainable development could not be discussed from a purely material point of view; global environmental and financial crises had shown that that approach was flawed. Fundamental obstacles to sustainable development included nationalism, ignorance of the plight of the less-privileged, materialism, gender inequalities, ineffective and inequitable governance structures and corruption.

103. At the national level, numerous actions had been undertaken, ranging from the development and implementation of policies, strategies and plans to the implementation of legislative, regulatory and fiscal measures (including the application of economic instruments) as well as institutional and social measures, such as green procurement, eco-labelling, information disclosure and awareness-raising, and technical measures aimed at cleaner production. Those measures had been based on the principle of "avoid, shift and improve". Avoid and shift measures had been used mainly in developed countries of the region.

104. In response to the appeals set out in Agenda 21[10] and the Johannesburg Plan of Implementation, many countries had recently developed national strategies for sustainable development. Those strategies addressed sustainable production and consumption, as well as issues related to the thematic cluster, such as transport, chemicals, waste management and mining. The formulation and implementation of national sustainable development strategies in various forms reflected the concern of policymakers to incorporate environmental issues into national development agendas.

[10] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigenda), resolution 1, annex II.

105. The motivation behind the green-growth agenda was the desire on the part of a number of countries in the region to promote sustainable consumption and production patterns. In addition, the majority of the countries in the region had addressed the emerging challenges of achieving sustainable development by making their legislation more responsive to the multidimensional requirements of the integration of their national environmental and development concerns.

B. Challenges and constraints

106. The increasing number of actions taken by Member States in the region, as well as supportive regional and international actions, highlighted the growing need to integrate environmental sustainability into the thematic cluster with a view to addressing the development challenges of both today and tomorrow. Recent crises had highlighted the fact that the ecological and social imbalances reflected in current economic growth patterns were not isolated, but closely interlinked. Addressing them would require that those linkages be recognized and that holistic and integrated approaches be adopted to increase the resilience of socio-economic systems. In order to do so, countries in the region needed to focus on environmentally sustainable and socially inclusive policies and actions.

107. The main challenge in promoting sustainability within the framework of the thematic cluster was technical: to decouple economic growth from environmental degradation, while preventing a rebound effect (for example, by increasing resource and energy efficiency, de-materializing and moving to a sustainable, low-carbon economy). The major economic challenge lay in providing a policy framework that would permit the internalization of social and environmental costs in order to affect private and public choices. That would be accomplished through a combination of policy levers, incentives, human settlement planning and investment in infrastructures, such as those for transport and waste management.

108. Significant challenges were also posed by a lack of explicit policy directions, weak institutional capacities, overlapping institutional mandates, a low level of environmental expenditure, knowledge gaps, a lack of technology, inadequate research and development, and lack of a consumer tradition. Further constraints included inadequate funding resources and a lack of access to alternative financing options. Challenges in other policy areas (regulatory, incentive-based, social and institutional) included the following:

(a) Stimulating demand for and the supply of sustainable products and services in the market, which would involve the creation of new economic activities and worthwhile jobs, within the carrying capacities of ecosystems;

(b) Mainstreaming the sustainable use and management of natural resources, including minerals and chemicals, in the decision-making processes of Governments, the private sector and civil society organizations;

(c) Enhancing social development through sustainable investment in people and communities, as highlighted in the Global Green New Deal;

(d) Coupling economic development with the creation of worthwhile jobs and increased well-being;

(e) Universally adopting sustainable public procurement policies and measures;

(f) Raising people's awareness about the impacts of their consumption choices and helping to shape their values through information and education, in order to promote changes in consumption and production patterns;

(g) Developing institutional capacity through knowledge management, technology transfer, education, training and awareness-raising;

(h) Promoting cooperative frameworks and partnership incentives for action at all levels and for international and regional cooperation;

(i) Enhancing the participation of major groups, in particular women and local authorities, as well as the private sector and local communities, in planning, decision-making and implementation;

(j) Maintaining a high growth rate while, at the same time, ensuring environmental sustainability;

(k) Ensuring that developed countries would meet their commitments with regard to common and differentiated responsibilities;

(l) Empowering communities to take action at the local level;

(m) Resolving issues related to conflicting policies;

(n) Addressing the absence of quantitative baseline information;

(o) Developing specific mechanisms to address knowledge gaps as well as the dissemination of information;

(p) Conducting gender analysis and ensuring equitable approaches;

(q) Developing mechanisms and strategies for the scaling-up of best practices;

(r) Addressing the special needs of the least developed countries and landlocked developing countries.

109. As a cross-sectoral issue, poverty remained among the principal and persistent challenges in the region. In the past, rapid economic growth had been achieved in the region of Asia and the Pacific through the externalization of environmental costs. Costs related to protecting labour and providing housing and social security had also been externalized. Thus, while absolute poverty had declined, relative poverty and disparities had increased.

C. Policy options/way forward

110. Given the fact that a number of common issues must be addressed in order to respond effectively to the region's challenges in various thematic areas (for example, capacity-building, technology transfer, financial resources and information gaps), it would be useful to strengthen regional forums so that they included the sharing of successful practices in such areas and the discussion of mechanisms for replicating and scaling up those practices. Extending successful models of bilateral cooperation to the framework of multilateral programmes should also be considered.

Furthermore, the usefulness of interregional cooperation, including that between Europe and Asia and the Pacific, was highlighted.

111. The integration of environmental sustainability into various development policies, including those promoting green growth, offered tremendous opportunities for the region. With its clear linkages to employment, livelihoods and improved access to services, integration had the potential to reduce poverty by providing economic stimuli and creating jobs. For example, the promotion of sustainable waste management or sustainable transport systems could trigger socio-economic development and create green jobs.

112. Similarly, industrial environmental management provided an opportunity to improve the efficiency of industrial use of energy and resources for cleaner production. However, it should be supported through incentives provided by market-based instruments, such as environmental taxes and user fees, targeted subsidies and eco-labels. In addition, it required Governments to provide the physical and social infrastructure necessary for efficient industrialization. Human resource development (through the cluster approach) would improve industrial efficiency through innovation.

113. Therefore, the policies and actions required for the development of resilient socio-economic systems should help to resolve the problems related to both cross-sectoral and thematic issues and should receive greater attention in national, regional and international dialogues. There was a need to recognize the linkages among the social, economic and ecological systems.

114. The careful monitoring of all measures aimed at sustainable development across sectors should be taken up by the Governments of Member States, and outcomes should be evaluated for further modification and improvements in order to optimize the benefits for the people in the region.

V. Concluding observation

115. Participants emphasized the linkage between ongoing climate change negotiations and the current thematic cluster of the Commission. Any decisions taken at the fifteenth Conference of the Parties to the United Nations Framework Convention on Climate Change, which would be held in Copenhagen from 7 to 18 December 2009, might have an impact on the deliberations of the Commission at its eighteenth and nineteenth sessions, and on the implementation actions taken subsequently at the national and international levels. For that reason, it was suggested that participants take appropriate action to transmit the outcome of the regional implementation meeting to the forthcoming United Nations Climate Change Conference.